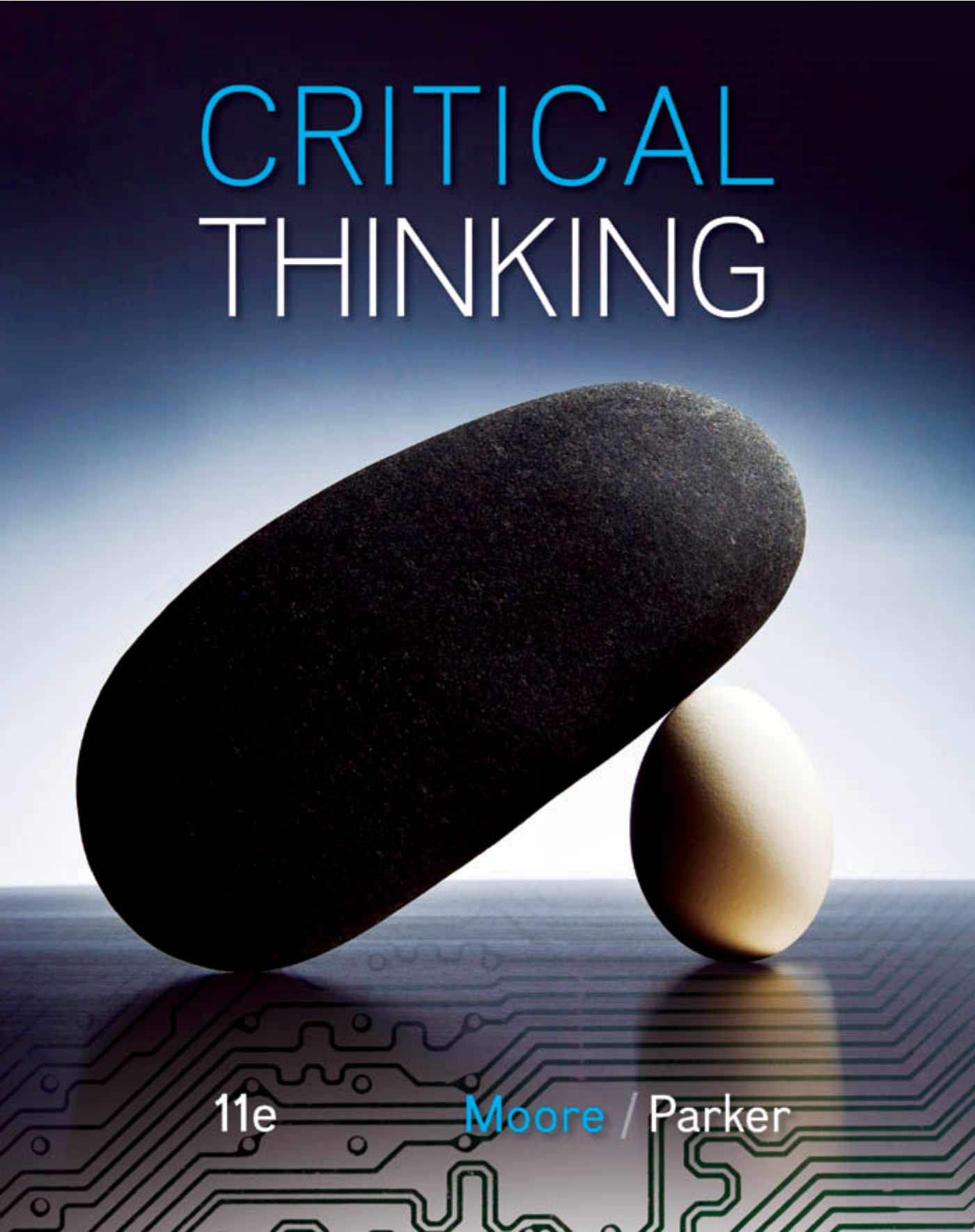
CRITICAL THINKING



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Moore / Parker

Eleventh Edition

Critical Thinking

Brooke Noel Moore
Richard Parker
California State University, Chico

with help in Chapter 12
from Nina Rosenstand and Anita Silvers

Mc Graw Hill Education

CRITICAL THINKING, ELEVENTH EDITION

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Brief Contents

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Critical Thinking . . . Skills for

The first integrated program designed specifically for the critical thinking course, Moore & Parker's *Critical Thinking* teaches students the skills they need in order to think for themselves—skills they will call upon in this course, in other college courses, and in the world that awaits. The authors' practical and accessible approach illustrates core concepts with concrete real-world examples, extensive practice exercises, and a thoughtful set of pedagogical features. McGraw-Hill Connect® and LearnSmart® for *Critical Thinking* coalesce in a highly adaptive learning environment where each student gets the targeted help he or she needs for more efficient mastery of course concepts.

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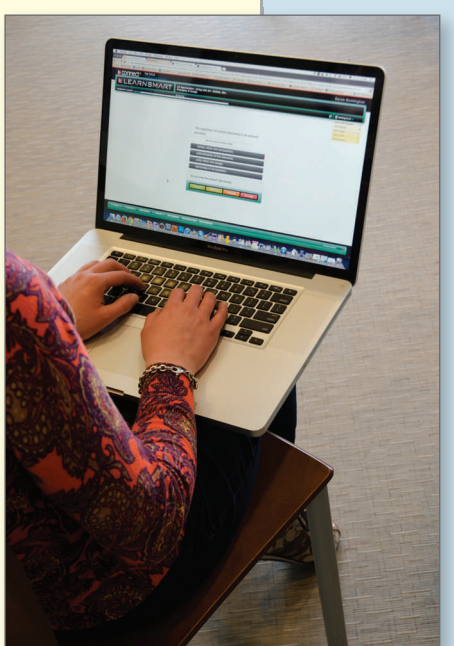
How many students *think* they know everything about how to think critically but struggle on the first exam? *Critical Thinking* helps students understand what they know and don't know about critical thinking concepts. LearnSmart Advantage, McGraw-Hill's adapting learning system suite, helps students identify what they know—and more importantly, what they don't know. Based on Bloom's Taxonomy, LearnSmart Advantage creates a customized study plan, unique to every student's demonstrated needs. With virtually no administrative overhead, instructors using LearnSmart Advantage are reporting an increase in student performance by one letter grade or more. Through this unique tool, instructors have the ability to identify struggling students quickly and easily, *before* the first exam. Regardless of individual study habits, preparation, and approaches to the course, students will find that *Critical Thinking* connects with them on a personal, individual basis and provides a road map for real success in the course.



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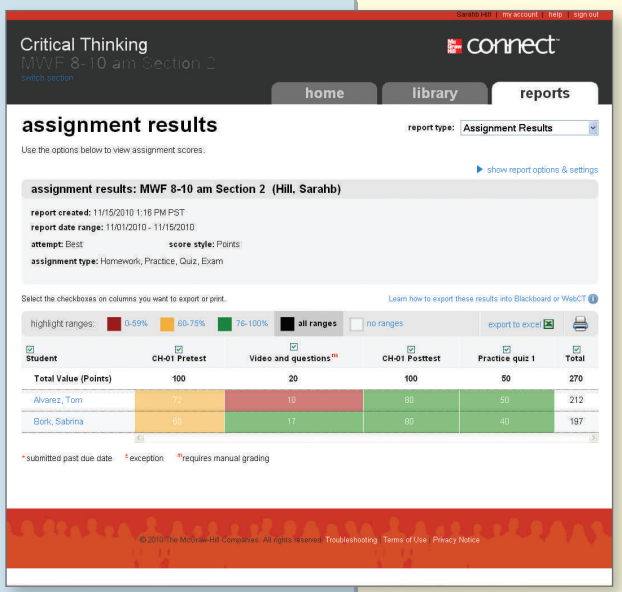


- *At-Risk Student Reports:* The at-risk report provides instructors with one-click access to a dashboard that identifies students who are at risk of dropping out of a course due to low engagement levels.
- *Category Analysis Reports:* The category analysis report is the place to go to and find out how your students are performing relative to specific learning objectives and goals.
- *Item Analysis Reports:* The item analysis report is the best way to get a bird's-eye view of a single assignment. You'll be able to tell if students are improving or if the concepts are something you want to spend additional time on in class.
- *Student Performance Reports:* The student performance report helps you search for a specific student in your class and focus on that student's progress across your assignments.
- *Assignment Results and Statistics Reports:* The assignment results report shows your entire class's performance across all of your assignments. Assignment statistics reports will give you quick data on each assignment including the mean score, high score, and low scores, as well as the number of times it was submitted.

■ Does P. Diddy dress well? The issue is *subjective*, or, as some people say, "a matter of opinion."

difficult or the subject matter is unfamiliar.* Perhaps some manifestation of the overconfidence effect explains why, in the early stages of the *American Idol* competition, many contestants appear totally convinced they will be crowned the next American Idol—and are speechless when the judges inform them they cannot so much as carry a tune.**

Closely related to the overconfidence effect is the **better-than-average illusion.** The illusion crops up when most of a group rate themselves as better than most of the group relative to some desirable characteristic, such as resourcefulness or driving ability. The classic illustration is the 1976 survey of SAT takers, in which well over 50 percent of the respondents rated themselves as better than 50 percent of other SAT takers with respect to such qualities as leadership ability.† The same effect has been observed when people estimate how their intelligence, memory, or job performance stacks up with the intelligence, memory, and job performances of other members of their profession or workplace. In our own informal surveys, more than 80 percent of our students rate themselves in the top 10 percent of their class with respect to their ability to think critically.

Unfortunately, evidence indicates that even when they are informed about the better-than-average illusion, people may *still* rate themselves as better than most in their ability to not be subject to it.††

That beliefs are generated as much by psychology and impulse as by evidence should come as no surprise. The new car that was well beyond our means yesterday seems entirely affordable today—though our finances haven't changed. If someone invited us to The Olive Garden we'd expect decent fare; but if they suggested we try dining at, say, The Lung Garden, we'd hesitate—even if we were told the food is identical. People will go out of their way to save $10 when buying a $25 pen, but won't do the same to

*See Sarah Lichtenstein and other authors, "Calibration of Probabilities: The State of the Art to 1980," in Daniel Kahneman, Paul Slovic, and Amos Tversky, *Judgment under Uncertainty: Heuristics and Biases* (Cambridge, England: Cambridge University Press, 1982), 306–34.

**This possibility was proposed by Gad Saad, *Psychology Today*, www.psychologytoday.com/blog/homo-consumericus/200901/self-deception-american-idol-is-it-adaptive.

†See Mark D. Alicke and other authors in "The Better-Than-Average Effect," in Mark D. Alicke and others, *The Self in Social Judgment: Studies in Self and Identity* (New York: Psychology Press, 2005, pp. 85–106. The better-than-average illusion is sometimes called the Lake Woebegone effect, in reference to Garrison Keillor's story about the fictitious Minnesota town "where all the children are above average."

††http://weblamp.princeton.edu/~psych/FACULTY/Articles/Pronin/The%20Bias%20Blind.PDF. The better-than-average bias has not been found to hold for all positive traits. In some things, people underestimate their abilities. The moral is that for many abilities, we are probably not the best judges of how we compare to others. And this includes

Appealing to Tradition

According to Representative Steve King of Ohio (pictured here), "Equal protection [under the Constitution] is not equal protection for same sex couples to marry. Equal protection was for a man and a woman to be able to get married to each other."

FALLACIES RELATED TO CAUSE AND EFFECT

It can be difficult to prove a cause-and-effect relationship between two variables, which is why fallacious reasoning can occur in this context. In this section we explore two important fallacies that can be made in reasoning about cause and effect. What the two fallacies have in common is this. Both assume that the timing of two variables relative to each other, in and of itself, is sufficient to establish that one is the cause and the other is the effect. This assumption is incorrect.

Post Hoc, Ergo Propter Hoc

Post Hoc, Ergo Propter Hoc means "After this, therefore because of this." A speaker or writer commits this fallacy when he or she assumes that the fact that one event came after another establishes that it was caused by the other. Here is an example:

> After I took Zicam my cold went away fast. Therefore taking Zicam caused my cold to go away fast.

The speaker makes a mistake to assume that Zicam caused the cold to go away fast. The argument is no better than this one:

> After I played poker my cold went away fast. Therefore playing poker caused my cold to go away fast.

Here is a slightly different example, a classic illustration of *post hoc, ergo propter hoc:*

> Every day the sun comes up right after the rooster crows; therefore the rooster causes the sun to come up.

More Engaging

Moore & Parker are known for fresh and lively writing. They rely on their own classroom experience and on feedback from instructors in getting the correct balance between explication and example.

- Examples and exercises are drawn from today's headlines.
- Students learn to apply critical thinking skills to situations in a wide variety of areas: advertising, politics, the media, popular culture.

I love the sense of humor of the authors, the very clear and elegant way they make critical thinking come alive with visuals, exercises and stories.

—Gary John, *Richland College*

[Before reading this chapter] most students don't realize the extent of product placement and other similar attempts at subtle manipulation.

—Christian Blum, *Bryant & Stratton, Buffalo*

More Relevant

Moore & Parker spark student interest in skills that will serve them throughout their lives, making the study of critical thinking a meaningful endeavor.

- Boxes show students how critical thinking skills are relevant to their day-to-day lives.
- Striking visuals in every chapter show students how images affect our judgment and shape our thinking.

The variety [in the exercises] was outstanding. [They] will provide ample opportunity for the students to put into practice the various logical principles being discussed.

—Ray Darr, *Southern Illinois University*

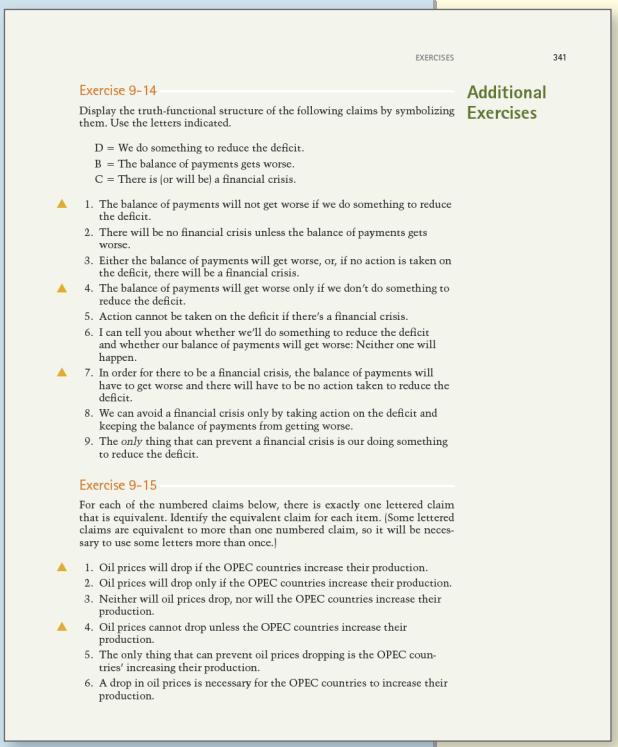
More Student Success

Moore & Parker provide a path to student success, making students active participants in their own learning while teaching skills they can apply in all their courses.

- Learning objectives link to chapter sections and in turn to print and online activities, so that students can immediately assess their mastery of the learning objective.
- Exercises are dispersed throughout most chapters, so that they link tightly with the concepts as they are presented.
- Students have access to over 2,000 exercises that provide practice in applying their skills.

Hands-on, practical, and one might say, even "patient" with the students' learning as it emphatically repeats concepts and slowly progresses them step by step through the process.

—Patricia Baldwin, *Pitt Community College*



EXERCISES 341

Additional Exercises

Exercise 9–14

Display the truth-functional structure of the following claims by symbolizing them. Use the letters indicated.

D = We do something to reduce the deficit.
B = The balance of payments gets worse.
C = There is (or will be) a financial crisis.

▲ 1. The balance of payments will not get worse if we do something to reduce the deficit.
2. There will be no financial crisis unless the balance of payments gets worse.
3. Either the balance of payments will get worse, or, if no action is taken on the deficit, there will be a financial crisis.
▲ 4. The balance of payments will get worse only if we don't do something to reduce the deficit.
5. Action cannot be taken on the deficit if there's a financial crisis.
6. I can tell you about whether we'll do something to reduce the deficit and whether our balance of payments will get worse: Neither one will happen.
▲ 7. In order for there to be a financial crisis, the balance of payments will have to get worse and there will have to be no action taken to reduce the deficit.
8. We can avoid a financial crisis only by taking action on the deficit and keeping the balance of payments from getting worse.
9. The *only* thing that can prevent a financial crisis is our doing something to reduce the deficit.

Exercise 9–15

For each of the numbered claims below, there is exactly one lettered claim that is equivalent. Identify the equivalent claim for each item. (Some lettered claims are equivalent to more than one numbered claim, so it will be necessary to use some letters more than once.)

▲ 1. Oil prices will drop if the OPEC countries increase their production.
2. Oil prices will drop only if the OPEC countries increase their production.
3. Neither will oil prices drop, nor will the OPEC countries increase their production.
▲ 4. Oil prices cannot drop unless the OPEC countries increase their production.
5. The only thing that can prevent oil prices dropping is the OPEC countries' increasing their production.
6. A drop in oil prices is necessary for the OPEC countries to increase their production.

There are a lot of exercises, which provides nice flexibility. The . . . mix of relatively easy and more challenging pieces . . . is useful in providing some flexibility for working in class.

—Dennis Weiss, *York College of Pennsylvania*

Teaching with Moore & Parker's *Critical Thinking*

The complete content of Moore & Parker's *Critical Thinking* is available to instructors and students in traditional print format as well as online with integrated and time-saving tools.

Blackboard® and McGraw-Hill Higher Education have teamed up! Now, ***all McGraw-Hill content (text, tools, and homework) can be accessed directly from within your Blackboard course—all with a single sign-on. Connect assignments within Blackboard automatically (and instantly) feed grades directly to your Blackboard grade center.*** No more keeping track of two grade books! Even if your institution is not currently using Blackboard, McGraw-Hill has a solution for you. Ask your sales representative for details.

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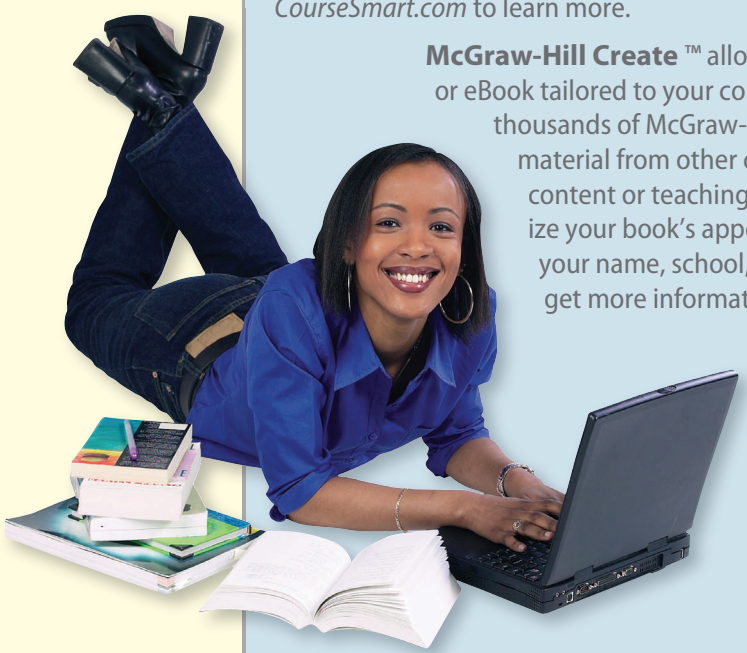


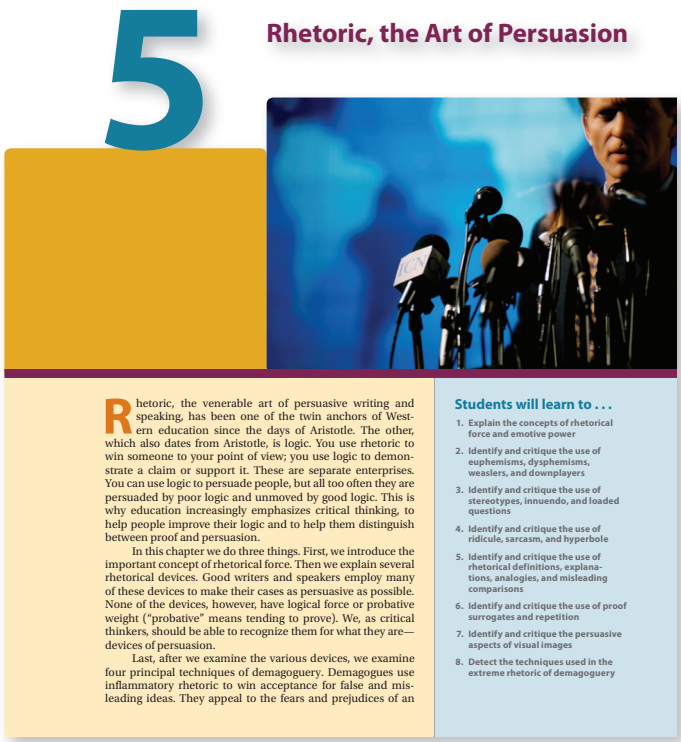
Changes to the 11th Edition

BROAD CHANGES

- Fallacies have been collected together into three new chapters:
  - Chapter 6: Relevance (Red Herring) Fallacies
  - Chapter 7: Induction Fallacies
  - Chapter 8: Formal Fallacies and Fallacies of Language
- Several additional fallacies are now covered, including:
  - Guilt by Association
  - Irrelevant Conclusion
  - Equivocation
  - Amphiboly
  - Accident
  - Generalizing from Exceptional Cases
  - Fallacious Appeal to Authority
  - Bandwagon Fallacy
  - Overlooking the Possibility of Random Variation
  - Overlooking the Possibility of Regression
  - Overlooking Prior Probabilities
  - Overlooking False Positives
  - Confusing Contraries and Contradictories
- A new section on the extreme rhetoric of demagoguery has been added, including the broad rhetorical techniques of
  - Otherizing
  - Demonizing
  - Fostering xenophobia
  - Fear and hate mongering
- The main forms of inductive reasoning have been consolidated into a newly written single chapter.
- A section on calculating probabilities has been added.
- Over 400 new exercises have been added, including several hundred new fallacy exercises.
- Hundreds of exercises from previous editions have been collected in the appendix.

CHAPTER-SPECIFIC CHANGES

- Chapter 1 *(What* Is *Critical Thinking, Anyway?)* contains new material on relativism and moral subjectivism, and adds discussion of confirmation bias. It contains 12 new exercises.



- Chapter 2 *(Two Kinds of Reasoning)* contains 25 new exercises and reflects our current thinking on inference to the best explanation.
- Chapter 3 *(Clear Thinking, Critical Thinking, and Clear Writing)* cleans up material on the purposes/uses of definitions. The chapter has 21 new exercises.
- Chapter 4 *(Credibility)* updates sections on news media, bias, and advocacy television and contains 15 new exercises.
- Chapter 5 *(Rhetoric, the Art of Persuasion)* more carefully distinguishes rhetoric from logic, and persuasion from support and demonstration. We have simplified coverage of the basic rhetorical devices and (we think) provided better illustrations of some of them. We have added a new section on the extreme rhetoric of demagoguery, and have added many new exercises.
- Chapters 6 *(Relevance [Red Herring] Fallacies)* is entirely new. Most of the fallacies covered in this chapter were covered in previous editions, but the treatment here is new. If you have used this textbook before, we recommend you read this chapter before using it. The chapter also contains numerous new exercises. You can find most of the exercises from previous editions in the new appendix at the end of this edition.
- Chapter 7 *(Induction Fallacies)* is also entirely new. As with Chapters 6 and 8, most of the fallacies in this chapter were covered in previous editions, but differently. The chapter contains all new exercises, but you can find most of the exercises from previous editions in the new appendix to this edition.
- Chapter 8 *(Formal Fallacies and Fallacies of Language)* is the third of four new chapters. It too includes fallacies not covered in previous editions, as well as others that were. We recommend you read the new material before assigning it. A section on consistency may be found in this chapter, and new exercises.
- Chapter 9 *(Deductive Arguments I: Categorical Logic),* along with the following chapter, is left unchanged but for minor edits, new exercises (a couple dozen in this chapter), and one major change in Chapter 10.
- Chapter 10 *(Deductive Arguments II: Truth-functional Logic)* has been left largely alone, something the great majority of our reviewers recommended. The exception is the removal of the section that provided a short alternative to treating simple deductive arguments. Most of that material is now found in the new Chapter 8. The chapter also has 38 new exercises.
- Chapter 11 *(Inductive Reasoning)* is the last of four new chapters. It is a comprehensive introduction to induction, including argument from analogy, generalization from samples, the statistical syllogism, causal statements,

principles of hypothesis formation, reasoning used in hypothesis confirmation, and probability calculation. Most of these topics were covered in previous editions, but were spread out over two chapters and explained differently. Also, we have included slightly new terminology here and there, and you might wish to become familiar with it before assigning the chapter.

- Chapter 12 *(Moral, Legal, and Aesthetic Reasoning)* includes a new case study. The Trayvon Martin/George Zimmerman case is described along with the Florida "stand your ground" law, and several questions relating it to material in this chapter are posed.

Students rushing to register for Moore & Parker's course.
Inland Valley Daily Bulletin/Thomas R. Cordova; appeared in the *Sacramento Bee*

Acknowledgments

These include Laura Wilk, former Brand Manager for critical thinking; Sarah Remington, current Brand Manager for critical thinking; Susan Messer, our Development Editor and worrier-in-chief, whose novel, *Grand River and Joy,* may move you at a deeper level than will this text; Dawn Groundwater, Senior Director of Development; Jolynn Kilburg, Content Project Manager.

As we have stated repeatedly, the errors you run across in this book are the responsibility of either Moore or Parker, depending upon whom you are talking to. Certainly our errors are not the responsibility of the excellent people at McGraw-Hill who have helped us.

The guidance of the following reviewers of current and previous editions and others who have written to us has been invaluable:

Keith Abney, California Polytechnic State University, San Luis Obispo
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Marie G. Zaccaria, Georgia Perimeter College

Over the years, our Chico State colleague Anne Morrissey has given us more usable material than anybody else. She's also given us more unusable material, but never mind. We've also had fine suggestions and examples from Curtis Peldo

of Chico State and Butte College; Dan Barnett, also of Butte College, has helped in many ways over the years.

We thank colleagues at Chico State, who are ever ready with a suggestion, idea, or constructive criticism; in particular, Marcel Daguerre, Randy Larsen, Becky White, Wai-hung Wong, Zanja Yudell, and Greg Tropea, whose death in 2010 left us saddened beyond words. Greg was a dear friend whose deep wisdom and quiet insight contributed significantly to our thinking over the course of many years. We are also grateful to Bangs Tapscott, Linda Kaye Bomstad, Geoff Bartells, and Jeffrey Ridenour for contributions both archival and recent.

Last, and especially, we give thanks to the two people who put up with us with patience, encouragement, and grace, Melinda Zerkle, and Marianne Moore.

A Note to Our Colleagues

In our view, *critical thinking* happens when you critique thinking. Our objective in this book is to set forth the fundamental criteria by which this may be accomplished—the standards that thinking must adhere to in any context, if it is to lead to truth.

Among the most important changes incorporated into this edition are these.

In past editions, we have scattered the discussion of fallacies throughout the book. In this edition, we bring the discussion together in three chapters. In addition, we have expanded the discussion. We have also replaced every fallacy exercise in previous editions—though you can still find the old exercises in an appendix at the end of the book.

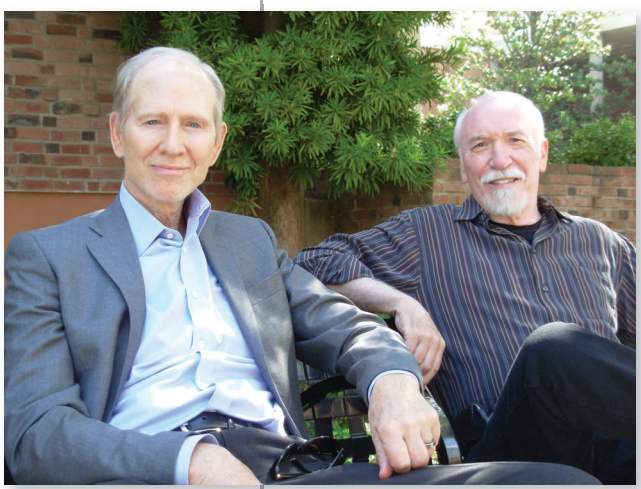
Further, we have consolidated discussion of inductive reasoning into a single chapter and have included new material on calculating probability.

Last edition, we added a section on ethos, pathos, and logos, as well as a section on cognitive biases. We think these two features, as well as our chapters on credibility and rhetoric, set this book off from many other critical thinking textbooks. Furthermore, in this edition, we have added a discussion of techniques universally present in the extreme rhetoric of demagogues. Being taken in by demagoguery is the hallmark of someone who does not think critically; the new discussion is overdue.

The previous edition of this book was integrated with *Connect,* McGraw-Hill's online learning platform. This edition is as well. *Connect* is keyed to the learning objectives found within this edition of the text. With *Connect,* students interact with each other and with the instructor online. If you are called upon to offer a completely online version of a critical thinking course, *Connect, LearnSmart,* and *SmartBook* offer you the tools to do so. We ourselves are fortunate enough not to have to do this, but we still use these resources for homework, content delivery, online testing, and data management. They may be particularly useful if you, like one of us, teaches a very large class.

We hope this edition of the text is useful to you, and we would appreciate your suggestions for improvement.

About the Authors



Brooke Moore and Richard Parker have taught philosophy at California State University, Chico, for almost as long as they can remember. Moore has been that university's Outstanding Professor, and both he and Parker have received top academic honors on their campus. Moore has seen several terms as department chair, and Parker has served as chair of the academic senate and dean of undergraduate education.

Moore has a bachelor's degree in music from Antioch College and a PhD in philosophy from the University of Cincinnati; Parker did his undergraduate degree at the University of Arkansas and his PhD at the University of Washington, both in philosophy.

Moore has finally given up being the world's most serious amateur volleyball player. He and Marianne share their house and life with several dogs. He has never sold an automobile.

Parker gets around in a 1962 MG or on a Harley softail. He plays golf for fun, shoots pool for money, and plays guitar for a semiprofessional flamenco troupe. He gets to Spain as often as he is able.

The two have remained steadfast friends through it all. They are never mistaken for one another.

To:
Alexander and Levi
From Richard

Sherry and Bill; and Sydney, Darby,
Peyton Elizabeth, and Griffin
From Brooke

This is not entirely a work of nonfiction.

1 What *Is* Critical Thinking, Anyway?

"It was all a big mistake," he said. Chris Elam, the communications director of the Republican Party of Texas, was referring to the statement in his party's platform opposing the teaching of critical thinking.* The Republican Party of Texas certainly did *not* oppose the development of critical thinking skills, he said.**

Are we relieved! Count us among those who think there should be *more* teaching of critical thinking skills rather than less.

But what exactly *is* critical thinking, anyway? It seems there are as many definitions of the concept as there are people you ask to define it.

There is at least common ground among educators about critical thinking. Every educator will say that critical thinking aims at making wise decisions and coming to correct conclusions. Most agree that jumping to conclusions and making ill-formed, indefensible, knee-jerk decisions is not critical thinking.

To refine this a bit, on the one hand we have good, old-fashioned thinking. That's what we do when we form opinions or judgments, make decisions, arrive at conclusions, and the

*http://s3.amazonaws.com/texasgop_pre/assets/original/2012Platform_Final.pdf.
**http://tpmmuckraker.talkingpointsmemo.com/2012/06/texas_gops_2012_platform_accidentally_opposes_teaching_of_critical_thinking_skills.phy?ref=fpb.

Students will learn to . . .

1. Define critical thinking
2. Explain the role of beliefs and claims in critical thinking
3. Identify issues in real-world situations
4. Recognize an argument
5. Define and identify the common cognitive biases that affect critical thinking
6. Understand the terms "truth" and "knowledge" as used in this book

like. On the other hand, we have critical thinking. That's what we do when we *critique* the first kind of thinking—subject it to rational evaluation. You might say that *critical thinking involves thinking about thinking.* We engage in it when we consider whether our thinking (or someone else's) abides by the criteria of good sense and logic.

Possibly you've taken courses where all you have to do is remember stuff. But in other courses—and in the workplace or in the military—you will perhaps have been asked to do more—maybe to design or evaluate something, to make a proposal or diagnose a situation, to explain or comment on something, or to do any number of other things that involve coming to conclusions. Possibly it worked this way: your instructor or colleagues or friends or supervisors read or listened to your findings, then *they* offered critical commentary. *They* gave you feedback (usually, we hope, positive). *They* evaluated your reasoning. If you are brilliant, you may not have needed their feedback. If you are brilliant, perhaps you never err in your thinking or leave room for other criticism. But most of us do occasionally make mistakes in reasoning. We overlook important considerations and ignore viewpoints that conflict with our own, and in other ways we don't think as clearly as we might. Most of us can benefit from a little critical commentary—even when it comes from ourselves. Our chances of producing a good essay or offering a sound proposal or making a wise decision improve if we don't simply write or propose or decide willy-nilly, but reflect on our reasoning and try to make it better. Our chances of thinking well improve, in other words, if we think *critically:* if we critique our own thinking as a thinking coach might.

This is a book in *critical* thinking because it offers guidance about *critiquing* thinking. The book and the course you are using it in, if you are, explain the minimum criteria of good reasoning—the requirements a piece of reasoning must meet, *no matter what the context,* if it is worth paying attention to. Along the way we will explore the most common and important impediments to good reasoning, as well as some of the most common mistakes people make when coming to conclusions. Other courses you take at the university offer refinements. In them you will learn what considerations are important from the perspective of individual disciplines. But in no course anywhere, at least in no course that involves arriving at conclusions, will thinking that violates the standards set forth in this book be accepted. If it does nothing else, what you read here and learn in your critical thinking course should help you avoid at least a few of the more egregious common errors people make when they reason. If you would have otherwise made these mistakes, you will have become smarter. Not smarter in some particular subject, mind you, but smarter in general. The things you learn from this book (and from the course you may be reading it for) apply to nearly any subject people can talk or think or write about.

To a certain extent, questions we should ask when critiquing our own—or someone else's—thinking depend on what is at issue. Deciding whom to vote for, whether to buy a house, whether a mathematical proof is sound, which toothpaste to buy, or what kind of dog to get involve different considerations. In all cases, however, we should want to avoid making or accepting weak and invalid arguments. We should also avoid being distracted by irrelevancies or ruled by emotion, succumbing to fallacies or bias, and being influenced by dubious authority or half-baked speculation. These are not the only criteria by which reasoning might be evaluated, but they are central and important, and they provide the main focus of this book.

Critical Thinking, the Long Version

The Collegiate Learning Assessment (CLA) Project of the Council for Aid to Education has come up with a list of skills that covers almost everything your authors believe is important in critical thinking. If you achieve mastery over all these or even a significant majority of them, you'll be well ahead of most of your peers—and your fellow citizens. In question form, here is what the council came up with:

How well does the student

- determine what information is or is not pertinent;
- distinguish between rational claims and emotional ones;
- separate fact from opinion;
- recognize the ways in which evidence might be limited or compromised;
- spot deception and holes in the arguments of others;
- present his/her own analysis of the data or information;
- recognize logical flaws in arguments;
- draw connections between discrete sources of data and information;
- attend to contradictory, inadequate, or ambiguous information;
- construct cogent arguments rooted in data rather than opinion;
- select the strongest set of supporting data;
- avoid overstated conclusions;
- identify holes in the evidence and suggest additional information to collect;
- recognize that a problem may have no clear answer or single solution;
- propose other options and weigh them in the decision;
- consider all stakeholders or affected parties in suggesting a course of action;
- articulate the argument and the context for that argument;
- correctly and precisely use evidence to defend the argument;
- logically and cohesively organize the argument;
- avoid extraneous elements in an argument's development;
- present evidence in an order that contributes to a persuasive argument?

www.aacu.org/peerreview/pr_sp07_analysis1.cfm.

BELIEFS AND CLAIMS

Why bother thinking critically? As we just said, the ultimate objective in thinking critically is to come to conclusions that are correct and to make decisions that are wise. Because our decisions reflect our conclusions, we can simplify things by saying that *the purpose of thinking critically is to come to correct conclusions.* The method used to achieve this objective is to evaluate our thinking by the standards of rationality. Of course, we can also evaluate someone else's thinking, though the objective there might simply be to help the person.

When we come to a conclusion, we have a belief. Concluding involves believing. If you *conclude* the battery is dead, you *believe* the battery is dead. Keeping this in mind, let's define a few key terms.

A belief is, obviously, something you believe. It is important to understand that a belief is *propositional,* which means it can be expressed in a declarative